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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/916,240	07/25/2001	Robert Kenneth Parr	130109.409	6843

500 7590 05/07/2003

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EXAMINER

KALAFUT, STEPHEN J

ART UNIT	PAPER NUMBER
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1745

DATE MAILED: 05/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/916,240

Applicant(s)

PARR ET AL.

Examiner

Stephen J. Kalafut

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-- Th MAILING DATE of this communication appears on the cover sheet with th correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16-26 is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☒ Claim(s) 11-15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4,5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 is confusing because a "high hydrogen condition" is recited as "indicated by an oxygen reading from the oxygen sensor". How a hydrogen condition is given by a sensor which detects oxygen is not understood. Claims 2-9 depend from claim 1 and would likewise be indefinite. The term "high hydrogen oxygen condition" in claim 6 is unclear. Is one of these reactants recited by mistake?

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 9 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Ito *et al.* (Japanese 60-158,557).

Claims 1-3 and 9 are interpreted as if "high hydrogen" is a typographical error, and "high oxygen" is intended. Ito *et al.* disclose a fuel cell with oxygen and "inflammable gas" sensors on the outlet side of the two electrodes, which would be "proximate the fuel cell". If either oxygen or the "inflammable gas", which would be hydrogen, as seen from the fuel processing equipment (1, 2, 4) on the anode side of the cell, is detected on the side of the cell opposite where it normally is used, a protection circuit (9) causes an emergency stop. The presence of the reactants on its respective opposite side would constitute a "high hydrogen" or "high oxygen"

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condition. This circuit would thus correspond to the present "switch" of claim 1 and the "first switch" of claim 10. The ability of the circuit to respond to these sensor inputs would constitute a program, while the activation of an emergency stop would imply the existence of an actuator, as recited in claim 9. All these claims, to the extent that claims 1-3 and 9 are understood, would thus be anticipated by Ito *et al.*

Claims 11-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The second switch, the comparison involving two hydrogen concentrations, the specific levels of the two reactants as bases for comparison, and a comparison involving a fuel flow value are not disclosed by the prior art applied above, or cited either below or by applicants.

Claims 4, 5, 7, and 8 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. The use of a temperature sensor in claims 4 and 5 and the specific levels of the two reactants as bases for comparison in claims 7 and 8 are not disclosed by the prior art.

Claims 16-26 are allowed. The process of operating a fuel cell, wherein fuel is provided upon determining a concentration of oxygen proximate the fuel cell above a threshold value, and a computer readable media for carrying out the process, are not disclosed by the prior art.

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The disclosure is objected to because of the following informalities: The numeral 47 in figure 4 and the numeral 706 in figure 5 are each used to indicate two different things. The numeral 761 in figure 6 is not identified in the specification. Applicants should identify, when known thereto, the serial numbers of the applications mentioned on pages 27, 36 and 37. Appropriate correction is required.

Claim 15 is objected to because of the following informalities: An "and" is needed between "threshold value" and "a fuel flow value", because the latter is the final value to which the hydrogen reading is compared. Appropriate correction is required.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Margiott *et al.* (US 6,519,510), Knights *et al.* (US 6,492,043), Boehm *et al.* (US 6,461,751), Reiser (US 6,497,971), Haridoss (US 2003/0003333) and Fuji (Japanese 8-250,139) disclose fuel cells with various controllers.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen J. Kalafut whose telephone number is (703) 308-0433. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan can be reached on (703) 308-2383. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

sjk  
April 28, 2003

  
STEPHEN KALAFUT  
PRIMARY EXAMINER  
GROUP 1700